

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the above amendment and the discussion below.

Aside from repeating previous rejections, the present Office Action contains a response indicating that "previous arguments were not persuasive because the proposed combination of references under 35 U.S.C. 103 is proper".

Applicants wish to point out that the proposed combination does not result in the present invention even if it is assumed, for purposes of argument, that this combination is obvious.

Claims 1-2, 6-7, 10-11 and 24-26 are rejected under 35 U.S.C. 103 as unpatentable over Haas '696 or Schmelz in view of Daudel, Kurzweil, D'Amico and Tsutsumi. This is the same rejection with identical wording in the last three Office Actions. The present application contains three independent claims 1, 10 and 24. Each of these claims define method steps which are not available from the references or their combination.

Claim 1 provides a method which determines the storage state of a SCR catalyst with channels for receiving gas flow. A measuring pickup is applied on at least one surface of one of the channels, as shown in Figure 7. The measuring pickup determines an electrical impedance of the catalyst and this impedance sensing takes place at a frequency between zero and an upper cut-off frequency. The wavelength which corresponds to the measuring frequency is significantly less than the dimensions of measuring pickup. This impedance is then used to

determine the storage state of the catalyst. As have been previously argued, and has been acknowledged by the Examiner, the primary references do not teach the scope of materials or the detection methods (page 3, line 7 of the rejection).

Applicants do not dispute that temperature sensing of a material has been done before or that electrical impedance has been measured before but it is one thing to indicate that a material has been measured and quite another to determine the storage state of the catalyst based on the measurement of the electrical impedance as defined in independent claims 1 and 10 or the thermal electro-motor force or the catalyst reaction to temperature change resulting from the application of a measuring pickup to a catalyst at a plurality of points as provided in claim 24.

Applicants submit that, even if the references are combined, neither of the base references to Haas or Schmelz would then be able to determine the storage state of a catalytic converter.

Claim 1 requires the determination of the storage state of a SCR catalyst by applying a measuring pickup to the catalyst and sensing a physical property of the catalyst from the measuring pickup in order to determine the storage state on the basis of that physical property. The measurement of the electrical conductivity of a material which is identical to the catalyst material, does not give any indication that it could be used to determine the storage state because a material by itself is not employed as a catalyst and independent claim 1, as well the other independent claims, do not apply a measuring pickup to a catalyst

material. The invention applies a measuring pickup to the catalyst itself which means that the catalyst is functioning or has functioned and it is the storage state which is measured on the basis of the measured physical property.

Independent claim 10 has an environment were the material identical to the catalyst is applied in addition to the catalyst but that material is arranged in an exhaust gas stream and that material is sensed when it is in that exhaust stream in order to determine the storage state of the catalyst.

In addition to all of these limitations, not available from the references or their combinations, independent claims 1, 10 and 24 additionally indicate that the sensing of the impedance takes place at a frequency range between zero and an upper cut off frequency and that the wavelength corresponding to the measuring frequency is significantly less than the dimensions of the measuring pickup. And still further independent claims 1, 10 and 24 have been amended to recited that the catalyst has at least one channel for receiving gas flow and that a measuring pickup is applied to at least one surface of one of the channels.

Claims 1, 10 and 24 are submitted as being replete with distinguishing features over the references or their combination and therefore the allowance of this application containing claims 1, 2, 6, 7, 10, 11 and 24-26 is respectfully requested.

The drawing changes required to Figures 1-4 and 5a-5b are submitted as a proposal herewith.

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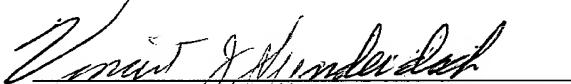
Amendment Dated: July 20, 2004

Reply to Office Action: March 24, 2004

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #095309.50125MI).

Respectfully submitted,



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